

Serial No.: 10/808,884
Filed: March 25, 2004

Remarks

The Examiner has issued a Notice of Non-Compliant Amendment dated February 10, 2006. The identifier for claims 14-16 have been changed to "withdrawn".

The Examiner had previously required a restriction under 35 U.S.C. 121 to one of the following inventions:

Group I - claims 1-13, drawn to an antireflective composition;

Group II - claims 14-16, drawn to a process.

The Examiner pointed out that Invention I and II are distinct, because the product as claimed can be used in a materially different process of using the product, such as in a method for aperture filling or in a method wherein the antireflective layer is etched in a step separate from the photoresist development.

The applicants had elected the claims of Group I (claims 1-13) for prosecution on the merits. Claims 14-16 have been withdrawn.

The applicants would like to traverse the restriction requirement in that the process claim refers to the use of the composition from claim 1 in the described process of claim 14. Thus the process refers to a specific composition and not to any material. In addition the product of the present invention, whether used as an aperture filling material or as an antireflective coating on a flat substrate, is the same process, and only differs in the thickness of the antireflective coating composition in the aperture or on the surface of the aperture. It is only the topographical nature of the substrate that is different. The processing steps of claim 14 are the same for aperture filling material or an antireflective coating on a flat substrate. The amended claim 14 refers to a process where the antireflective coating and the photoresist are removed in the same step. Thus, the invention of

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Group I and Group II is believed not to be distinct and it is requested that the Examiner kindly remove the restriction requirement.

The Examiner has objected to claim 11 and 12. Claim 11 has been amended by replacing 'layer' with 'composition', and claim 12 has been deleted.

The Examiner has rejected Claims 1-6, 9, 12-13 under 102(b) as being anticipated by Holmes (US 6,110,653). The Examiner has also rejected claims 7-8 under 35 USC 103(a) as being unpatentable over Holmes, and rejected claim 11 as being unpatentable over Holmes as applied to claim 1, and further in view of Jung (US 6,803,172).

As noted by the Examiner, Holmes teaches a water soluble polymer and a crosslinker. Holmes is very specific that the polymer of his invention be only water soluble and the polymers disclosed are hydroxystyrene-sulfonated styrene copolymer, poly(2-isopropenyl-2-oxazoline, and poly(acrylic acid), where such polymers are known to be water soluble. The disclosure of the water soluble polymers is given in column 2, lines 23-24, column 3 lines 6-9, column 3 line 81 – column 4 line 13, and Examples 1-3.

Claims 1, 6, 7, 8 and 11 have been amended. Claim 12 has been deleted and new claims 17-19 have been added.

The present invention refers to water insoluble polymers, as described in the specification on page 6, line 23. Water insoluble polymers are not described or taught by Holmes in his patent. One of ordinary skill in the art would not be led to use a water insoluble polymer and a crosslinker to form a positive bottom photo imageable antireflective coating from reading Holmes' patent. Thus the presently claimed polymers are novel and unobvious over Holmes.

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Since the applicants believe the amended claim 1 is novel and unobvious claims 7-8 are believed to be patentable over Holmes. Similarly, claim 11 is also believed to be patentable over Holmes as applied to claim 1 and further in view of Jung (US 6,803,172).

In view of the above amendments and remarks, the present application is believed to be in condition for allowance, and reconsideration of it is requested. If the Examiner disagrees, she is requested to contact the attorney for Applicants at the telephone number provided below.

Respectfully submitted,



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